



Title: DSP-4 DUAL-SPECIFICITY PHOSPHATASE

Express Mail No. EV207699786US

Inventor(s): Ralf M. Luche and Bo Wei

Serial No. 09/544,517

Docket No. 200125.410

DSP4, ENCODED BY 651 BASE PAIRS

ACATTGCATC CCTGGGATAA ACGGACCTGG ACAACTCACT CTCTTGGTCT GTGGCTGCTG CGGTTACCTG GATGGGCGAA CACCTCTGAG
GCTGGCTTTG TTACCTGGGC AATAAGGGAC TAGCAGTTCA GCCGTTTTCT ATGCTGCTG GATTGTGTTG TATTTGTTCC CAGCCACTGC
TCATGTAATG TACTCCCTTA ACCAGGAAAT TAAAGCATTC TCCCGGAATA ATCTCAGGAA GCAATGCACC AGGGTGACAA CGCTAACTGG
AAAGAAAATT ATAGAAACAT GGAAAGATGC CAGAATTCAT GTTGTTGAAG AAGTAGAGCC GAGCAGTGGG GGTGGTTGTG GTTATGTGCA
GGACCTTAGC TCGGACCTGC AAGTTGGCGT TATTAAGCCA TGGTTGCTCC TAGGGTCACA AGATGCTGCT CATGATTTGG ATACACTGAA
AAAGAATAAG GTGACTCATA TTCTTAATGT TGCATATGGA GTTGAAAATG CTTTCCTCAG TGACTTTACA TATAAGAGCA TTTCTATATT
GGATCTGCCT GAAACCAACA TCCTGTCTTA TTTTCAGAA TGTTTGAAT TTATTGAAGA AGCAAAAAGA AAAGATGGAG TGGTTCTTGT
TCATTGTAAT GCAGGCGTTT CCAGGGCTGC TGCAATTGTA ATAGGTTTCC TGATGAATTC TGAACAAACC TCATTACCA GTGCTTTTTC
TTTGGTGAAA AATGCAAGAC CTCCATATG TCCAAATTCT GGCTTCATGG AGCAGCTCG TACATATCAA GAGGGCAAAG AAAGCAATAA
GTGTGACAGA ATACAGGAGA ACAGTTCATG AGTTGCATTG TAGCAGACAA TGGACAACTG TAGTTTCTGA ATTGACTTCT ATAGCCATCT
TTTCCCTTTT TTGGAGAGTA GACTAGCAAA ACTCCCTTTT TTCTCTTGCC TTTTATGTC ATAAATGGAG GTCAATCTGA TTGTCCTGAC
CTACTGTATA AGTAAATTTT AAATGTCATT ACTTCTCTT TGTATTATA ATGTGTGATT AAATGCTTTT TTAAATTGCT AAGGGAAAAT
AAAAAA

Fig. 1

TRANSLATED, 217 AMINO ACIDS

MYSLNQEIKAFSRNNLRKQCTRVTTLTGKKIETWKDARIHVVEEVEPSSGGGCGYVQDLSSDLQVGVIKPLW
LLGSQDAAHDLTLKKNKVTHILNVAYGVENAFSLDFTYKISILDLPETNILSYFPECFEFIEEAKRKDGVV
LVHCNAGVSRAAAIVIGFLMNSEQTSFTSAFSLVKNARPSICPNSGFMEQLRTYQEGKESNKCRIQENSS

Fig. 2



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1 100
SOLDRD-PNSATISDGPISNSQSPSPV-EILPFI YLGCHKOSTNLDVLEEFGIKYILNVTPNLPNFENAGEFKYKQIPISDHMSQNL SQFFPEAISFI
DRELPSATESDGPSPSPV-SQAPFPV-QILPFI YLGCAKOSTNLDVLEEFGIKYILNVTPNLPNPFENAGEFKYKQIPISDHMSQNL SQFFPEAISFI
GLCEGKPAALLPMSLSQPCLPVPSYGL TRILPFI YLGSQKOVLMKULNTQNGISYVLAWSNCPKP-OFICESRFRVVPINDNYCEKLLPMLKSTIEFI
PAQALPPAGAENSNDP-RVPIYDQGGPVEILPFI YLGSCHNISSNL QGLQACGITTAYLVNSASCPNHF--GLFHYKSIPIVEDNQMVLSANFQERISFI
PLSTSYPDSEAGSCSSCSTPL YDQGGPVEILPFI YLGSAYHASKOMLDALGITAI LNVSSDCPNHF--GHYQYKSIPIVEDNHKADISSHFNHEDIFI
PVPPSATEPLDLGSCSGTPLHQGGPVEILPFI YLGSAYHARKOMLDALGITAI LNVSSDCPNHF--GHYQYKSIPIVEDNHKADISSHFNHEDIFI
SERALISQCGKPYVNSYRPRYDQGGPVEILPFI YLGSAYHASKCEFLANLHITALLNVSRRTSEACH--THLHYKSIPIVEDNHKADISSHFNHEDIFI
HVVEEVEPSSGGGCGYVQDLSSOLQVGY--IKPHLLIGSQDHAHDLTLKKNKYTHILNVAYGYENAFI--SDFTYKSIPIVEDNHKADISSHFNHEDIFI
P q g ILP LylGs a l# \$ g/t Lhvs pn f f %k !p! D iss f eai FI

PYST1,
MKP-7,
hVH5
PAC1
MKP-1,
MKP-4,
MKP-5,
DSP-4
Consensus

101 110 120 130 140 150 160 170 175
DEARGKNCGLVHCLAGISRSYTVTVAYLMQKLNLSMNDYDIYKMKSNISPNFNFHGLLOFERTLGLSS
DEARSKCGVLVHCLAGISRSYTVTVAYLMQKLNLSMNDYDIYKMKSNISPNFNFHGLLOFERTLGLSS
IKAKLSSCQVTVHCLAGISRSATIAIAYIMKTNGHSSDDAYRFVKKRPSISPNFNFHGLLOFERTLGLSS
DSVKNSSGGRVTVHCLAGISRSATIAIAYIMKTNGHSSDDAYRFVKKRPSISPNFNFHGLLOFERTLGLSS
DSIKNAGGRVTVHCLAGISRSATIAIAYIMKTNGHSSDDAYRFVKKRPSISPNFNFHGLLOFERTLGLSS
DAYKDCRGRVTVHCLAGISRSATIAIAYIMKTNGHSSDDAYRFVKKRPSISPNFNFHGLLOFERTLGLSS
DCVREKGGKVLVHCLAGISRSATIAIAYIMKTNGHSSDDAYRFVKKRPSISPNFNFHGLLOFERTLGLSS
FEAKRKGUGVTVHCLAGISRSATIAIAYIMKTNGHSSDDAYRFVKKRPSISPNFNFHGLLOFERTLGLSS
ak k g VLVHC AGISRSat! a%ln s %f k r r !sPnf F%gQLI y#

PYST1,
MKP-7,
hVH5
PAC1
MKP-1,
MKP-4,
MKP-5,
DSP-4
Consensus

Fig. 3



DSP-4

Northern blot analysis

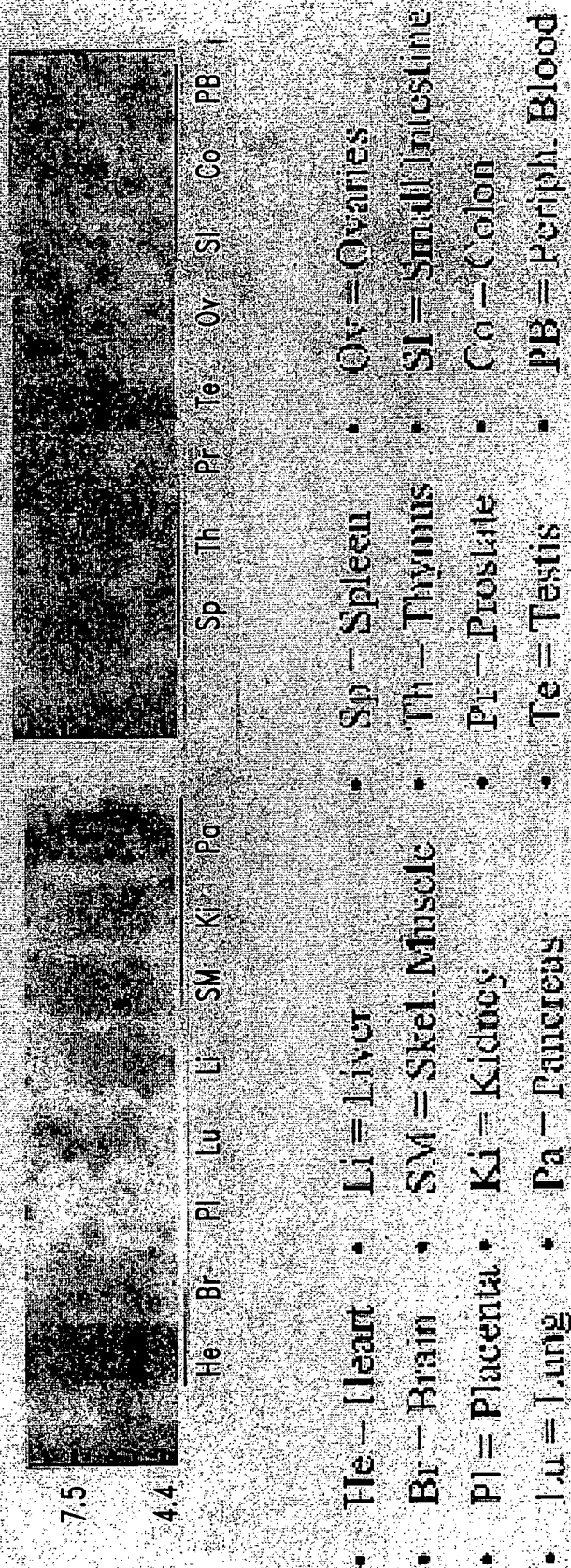


Fig. 4